

Abstract

The present invention concerns a method and a device for reconstructing and representing multidimensional objects from one- or two-dimensional image data, particularly from ultrasound image data, based on recordings (7) of one- or two-dimensional partial image areas (6) of an object (1), wherein the spatial and/or chronological positions of the individual partial image areas (6) are used along with the one- or two-dimensional image information (13) of the individual partial image areas (6) to generate one- or two-dimensional image data, wherein a first group of space elements (15a) is generated in a multidimensional voxel space (9) from first space elements (10a) which contain multidimensional image information and touch or intersect planes or lines of partial image areas (6) by means of the one- or two-dimensional image data, and wherein a second group of space elements (15b) is generated in the multidimensional voxel space (9) from second space elements (10b) by means of an information transformation from the multidimensional image information of the first group of space elements (15a). The first space elements (10a) are defined by means of the partial image areas (6) by arranging the partial image areas (6) in the multidimensional voxel space (9). For example, the second space elements (10b) can be determined on the basis of a spatial/chronological distance transformation or by means of so-called search beams.

[Figs. 3, 3a, 3b]

